

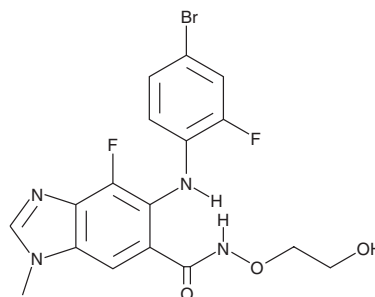
# PRODUCT INFORMATION



## Binimetinib

Item No. 16996

**CAS Registry No.:** 606143-89-9  
**Formal Name:** 5-[(4-bromo-2-fluorophenyl)amino]-4-fluoro-N-(2-hydroxyethoxy)-1-methyl-1H-benzimidazole-6-carboxamide  
**Synonyms:** ARRY-438162, MEK162  
**MF:** C<sub>17</sub>H<sub>15</sub>BrF<sub>2</sub>N<sub>4</sub>O<sub>3</sub>  
**FW:** 441.2  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 213, 257 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Binimetinib is supplied as a crystalline solid. A stock solution may be made by dissolving the binimetinib in the solvent of choice. Binimetinib is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of binimetinib in ethanol is approximately 0.5 mg/ml and approximately 30 mg/ml in DMSO and DMF.

Binimetinib is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, binimetinib should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Binimetinib has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Binimetinib is a MEK1 and MEK2 inhibitor (IC<sub>50</sub>s = 1.8 and 0.92 nM, respectively).<sup>1</sup> It is selective for MEK1/2 over a panel of RAF/MEK/ERK pathway kinases at 10 μM. Binimetinib reduces cell growth in HT-29, COLO 205, and LoVo colorectal cancer cell lines (IC<sub>50</sub>s = 0.48, 0.52, and 2.2 nM, respectively). It reduces tumor volume in a COLO 205 mouse xenograft model when administered at a dose of 0.3 mg/kg. Formulations containing binimetinib have been used in the treatment of various cancers.

### Reference

1. Yamaguchi, T., Kakefuda, R., Tajima, N., *et al.* Antitumor activities of JTP-74057 (GSK1120212), a novel MEK1/2 inhibitor, on colorectal cancer cell lines *in vitro* and *in vivo*. *Int. J. Oncol.* **39**(1), 23-31 (2011).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

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